

**DISCRETE MATH HOMEWORK: COMBINATORICS:
COUNTING, PERMUTATIONS, AND COMBINATIONS**

MR. FORTIER

- (1) In a bag with 3 green balls, 4 yellow balls, and 5 white balls:
 - a. What is the probability you get 1 green ball and 1 white ball with replacement?
 - b. What is the probability you get 2 yellow balls without Replacement?

- (2) How many Combinations are there in a lottery Drawing with 4 numbers 1 – 5?
What is the probability you pick the right combination?

- (3) Ms. Howe is giving a five-question true/false quiz.
 - a. In how many ways can a student select three of the questions to mark true?

 - b. In how many ways can a student select three of the questions to mark False?

 - c. In how many ways can a student select exactly three of the questions to mark true?

- (4) Johnny Student is taking a 5 question multiple choice test where each question has choice a through d options.
 - a. How many possibilities are there for 3 answers to c ?

 - b. How many possibilities are there for exactly one question to be b